**WHAT IS CLAIMED IS:**

1. A method of preventing and/or treating diabetes type 2 in a subject in need thereof, said method comprising step of administering pharmaceutically effective amount of an extract of plant Pureria tuberosa or butanol fraction of the extract or Lupinoside A4 ($LPA_4$), optionally along with additive(s) to the subject.

2. A method as claimed in claim 1, wherein the subject is an animal.

3. A method as claimed in claim 1, wherein the subject is a human being.

4. A method as claimed in claim 1, wherein the extract is obtained from root of the plant.

5. A method as claimed in claim 1, wherein the additive is selected from a group comprising nutrients such as proteins, carbohydrates, sugars, talc, magnesium stearate, cellulose, calcium carbonate, starch, gelatin paste, pharmaceutically acceptable carrier, excipients, diluent and, solvent.

6. A method as claimed in claim 1, wherein the fraction is administered at the concentration ranging between 1 to 40 mg /kg body weight.

7. A method as claimed in claim 1, wherein the Lupinoside is administered at the concentration ranging between 1 to 40 mg /kg body weight.

8. A method as claimed in claim 1, wherein the administration route is selected from a group comprising orally, intravenously, intramuscularly, and subcutaneously.

9. A pharmaceutical composition useful in preventing and/or treating diabetes type 2, said composition comprising an extract of plant Pureria tuberosa or butanol fraction of the extract or Lupinoside A4 ($LPA_4$), and additive(s).

10. A pharmaceutical composition as claimed in claim 9, wherein the additive is selected from a group comprising nutrients such as proteins, carbohydrates,

sugars, talc, magnesium stearate, cellulose, calcium carbonate, starch, gelatin paste, pharmaceutically acceptable carrier, excipients, diluent and, solvent.

11. A pharmaceutical composition as claimed in claim 9, the extract is obtained from root of the plant.

12. A pharmaceutical composition as claimed in claim 9, the fraction is of concentration ranging between 1 to 40 mg /kg body weight.

13. A pharmaceutical composition as claimed in claim 9, the Lupinoside is of concentration ranging between 1 to 40 mg /kg body weight.

14. A pharmaceutical composition as claimed in claim 9, wherein the composition is in a form selected from a group comprising capsule, syrup, concentrate, powder, and granules.

15. A pharmaceutical composition as claimed in claim 9, wherein the extract is an aqueous extract.

16. A method of augmenting Glut4 phosphorylation and Glut4 translocation to a target cell membrane to enhance insulin signal in a signal transduction pathway in a subject in need thereof, said method comprising administering pharmaceutically effective amount of an extract of plant Pureria tuberosa or butanol fraction of the extract or Lupinoside A4 ($LPA_4$), optionally along with additive(s) to the subject.

17. A method as claimed in claim 16, wherein the subject is an animal.

18. A method as claimed in claim 16, wherein the subject is a human being.

19. A method as claimed in claim 16, wherein the extract is obtained from root of the plant.

20. A method as claimed in claim 16, wherein the additive is selected from a group comprising nutrients such as proteins, carbohydrates, sugars, talc, magnesium stearate, cellulose, calcium carbonate, starch, gelatin paste, pharmaceutically acceptable carrier, excipients, diluent and, solvent.

21. A method as claimed in claim 16, wherein the fraction is administered at the concentration ranging between 1 to 40 mg /kg body weight.

22. A method as claimed in claim 16, wherein the Lupinoside is administered at the concentration ranging between 1 to 40 mg /kg body weight.

23. A method as claimed in claim 16, wherein the method helps prevent/treat type 2 diabetes.

24. A method as claimed in claim 16, wherein the method shows increase in glucose uptake by the cells.

25. A method as claimed in claim 16, wherein the method is non-toxic to the cells.

26. A method as claimed in claim 16, wherein the translocation is from cytosol to membrane of the insulin response cells.

27. A method as claimed in claim 16, wherein the Lupinoside $A_4$ ($LP_4$) prevents palmitate induced defects on insulin signaling.

28. A method as claimed in claim 16, wherein the Lupinoside $A_4$ ($LP_4$) allows insulin to stimulate IR-beta and Akt phosphorylation.

29. A simplified and inexpensive process of obtaining extract and thereafter selectively, its active n-butanol fraction and active molecule Lupinoside PA ($LPA_4$), useful in preventing and/or treating diabetes type 2, said process comprising steps of:

    a. cutting the plant parts into small parts,

b. extracting the cut parts with methanol and water,

c. partitioning the methanol and water extract between ethyl acetate and water,

d. extracting the aqueous layer further with n-butanol to obtain butanol fraction, and

e. subjecting the n-butanol fraction to chromatography with water and methanol as eluent to obtain Lupinoside $PA_4$ ($LPA_4$).

30. A method as claimed in claim 29, wherein the plant part is root.

31. A method as claimed in claim 29, wherein the solvent is selected from a group comprising methanol, and water.

32. A method as claimed in claim 29, wherein the water and methanol are in the ratio of about 1:1.

33. A method as claimed in claim 29, wherein the chromatography is column chromatography.